

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application.

Listing of Claims:

1. (currently amended) An automatic teller machine (ATM) electronically connected to one or more devices, the one or more devices comprising:

a deposit device configured to receive ~~an initial~~ a plurality of bank notes ~~and, subsequently, a counterfeit bank note which is physically the same bank note after having been identified as a counterfeit bank note at an external station;~~

an image extraction device configured to extract one or more initial images of the plurality of bank notes ~~from the initial bank note and one or more subsequent images from the counterfeit bank note;~~

the image extraction device also being configured to receive a counterfeit bank note, which has been identified as being counterfeit at an external station, and extract one or more subsequent images of the counterfeit bank note;

a transaction log device configured to attach a transaction log to the one or more initial images of the ~~initial~~ plurality of bank notes;

a comparison device configured to compare the one or more initial images of the ~~initial~~ plurality of bank notes to the one or more subsequent images of the counterfeit bank note in order to obtain a comparison result, the comparison device being configured to calculate values indicating a degree of similarity between the

~~initial plurality of~~ bank notes and the counterfeit bank note as said comparison result;
and

a retrieval device ~~for tracing the counterfeit bank note~~, which is configured to retrieve the transaction log attached to one of the initial plurality of bank notes, if the comparison device determines that the one or more initial images of said one of the initial plurality of bank notes are within a range of similarity to the one or more subsequent images of the counterfeit bank note.

2. (currently amended) The automatic teller machine of Claim 1, the one or more devices further comprising at least one of:

a storage device configured to store the one or more initial images of the ~~initial plurality of~~ bank notes, the one or more subsequent images of the counterfeit bank note and the transaction log; and

a network link to an external storage device configured to store the one or more initial images of the ~~initial plurality of~~ bank notes, the one or more subsequent images of the counterfeit bank note and the transaction log.

3. (canceled).

4. (previously presented) The automatic teller machine (ATM) electronically connected to one or more devices according to claim 1, wherein the image extraction device is further configured to:

- extract a front side initial image in a first initial position;
- extract a front side initial image in a second initial position;
- extract a back side initial image in a first initial position; and
- extract a back side initial image in a second initial position.

5. (previously presented) The automatic teller machine of Claim 4, wherein the image extraction device is further configured to:

- extract a front side subsequent image in a first subsequent position;
- extract a front side subsequent image in a second subsequent position;
- extract a back side subsequent image in a first subsequent position; and
- extract a back side subsequent image in a second subsequent position.

6. (previously presented) The automatic teller machine of Claim 5, wherein the comparison device is further configured to compare each subsequent image in each subsequent position a plurality of times to a corresponding initial image.

7. (canceled).

8. (previously presented) The automatic teller machine of Claim 1, wherein the comparison device is further configured to analyze image characteristics using a Euclid distance formula, and further configured to determine whether the one or more initial images and the one or more subsequent images have a Euclid distance near zero, wherein the range of similarity includes having a Euclid distance near zero.

9-11. (canceled).

12. (currently amended) A method of tracing bank notes, comprising the steps of:

receiving ~~[[a]]deposits of an initial~~ a plurality of bank notes;

extracting one or more initial images from the ~~initial~~ plurality of bank notes;

attaching an initial transaction log to the one or more initial images of the
plurality of bank notes;

~~receiving one or more subsequent images of a deposit of a counterfeit bank~~
~~note, which is physically the same bank note as the initial bank note after having~~
~~been identified as a counterfeit bank note, wherein the step of receiving one or more~~
~~subsequent images comprises receiving a deposit of a subsequent bank note;~~

extracting one or more subsequent images from the ~~counterfeit~~ subsequent
bank note;

comparing the one or more initial images of the ~~initial~~plurality of bank notes to the one or more subsequent images of the counterfeit bank note by calculating values indicating a degree of similarity between the ~~initial~~plurality of bank notes and the counterfeit bank note in order to obtain a comparison result; and

retrieving the initial transaction log based on the comparison result, if the comparison result indicates that the one or more initial images of one of the ~~initial~~plurality of bank notes are within a range of similarity to the one or more subsequent images of the counterfeit bank note,

wherein the steps of extracting one or more initial images from the ~~initial~~plurality of bank notes and extracting one or more subsequent images from the counterfeit bank note are carried out using the same image extraction device.

13. (canceled).

14. (previously presented) The method of Claim 12, wherein the step of extracting one or more initial images comprises:

- extract a front side initial image in a first initial position;
- extract a front side initial image in a second initial position;
- extract a back side initial image in a first initial position; and
- extract a back side initial image in a second initial position.

15. (canceled).

16. (previously presented) The method of Claim 15, wherein the step of extracting one or more subsequent images comprises:

extract a front side subsequent image in a first subsequent position;

extract a front side subsequent image of the counterfeit bank note in a second subsequent position;

extract a back side subsequent image of the counterfeit bank note in a first subsequent position; and

extract a back side subsequent image of the counterfeit bank note in a second subsequent position.

17. (previously presented) The method of Claim 16, wherein the step of comparing comprises comparing each subsequent image in each subsequent position a plurality of times to a corresponding initial image.

18. (currently amended) The method of Claim 12, wherein the one or more initial images of said one of the plurality of bank notes include a unique characteristic that is specific to ~~only said one of the plurality of bank notes, wherein the initial bank note is the only one bank note with the unique characteristic, and~~ wherein the unique

characteristic includes other information besides a serial number of the ~~initials~~said of the plurality of bank notes.

19. (previously presented) The method of Claim 13, wherein the step of comparing comprises:

analyzing image characteristics using a Euclid distance formula; and
determining that the one or more initial images and the one or more subsequent images have a Euclid distance near zero, wherein the range of similarity includes having a Euclid distance near zero.

20. (currently amended) The method of Claim 12, wherein the steps of the method are stored on a non-transitory computer-readable medium as one or more instructions for tracing bank notes, wherein the one or more instructions, when executed by one or more processors, cause the one or more processors to perform the steps of the method.

21. (new) The automatic teller machine of Claim 1, wherein the one or more initial images of the one of the plurality of bank notes include a unique characteristic that is specific to said one of the plurality of bank notes, and wherein the unique characteristic includes other information besides a serial number of said one of the plurality of bank notes.